DEPARTMENT OF DEFENSE (AFHSC)

Detecting and Reporting DoD Cases of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) Infection: Guidance as of 18 SEP 2014

1. CDC/WHO Guidance for Surveillance

CDC has updated interim guidance for health professionals on the evaluation of human infections with Middle East Respiratory Syndrome Coronavirus (MERS-CoV), paraphrased below.

CDC recommends that patients meeting these criteria be evaluated epidemiologically and tested for MERS-CoV:

Persons who meet the following criteria for "patient under investigation" (PUI) should be reported to the local preventive medicine/public health officer and evaluated for MERS-CoV infection:

- Fever AND pneumonia or acute respiratory distress syndrome (based on clinical or radiological evidence of consolidation); AND EITHER
  - History of travel to the Arabian Peninsula or neighboring countries (including Bahrain, Iraq, Iran, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian territories, Qatar, Saudi Arabia, Syria, the United Arab Emirates (UAE), and Yemen) within 14 days before onset of illness; OR
  - Close contact with a symptomatic traveler who developed fever and acute respiratory illness (not necessarily pneumonia) within 14 days after traveling from countries in or near the Arabian Peninsula; OR
  - Is a member of a cluster of patients with severe acute respiratory illness (e.g. fever and pneumonia requiring hospitalization) of unknown etiology in which MERS-CoV is being evaluated, in consultation with the local preventive medicine/public health officer.

OR

- Fever AND symptoms of respiratory illness (not necessarily pneumonia; e.g., cough, shortness of breath) AND being in a healthcare facility (as a patient, worker, or visitor) within 14 days before symptom onset in a country or territory in or near the Arabian Peninsula in which recent healthcare-associated cases of MERS have been identified (currently Jordan, Saudi Arabia, and UAE).

Patients who meet the criteria for a PUI should also be evaluated for common causes of community-acquired pneumonia. This evaluation should be based on clinical presentation and epidemiologic and surveillance information. Testing for MERS-CoV and other respiratory pathogens can be done simultaneously. Positive results for another respiratory pathogen should not necessarily preclude testing for MERS-CoV.

A patient who is considered a PUI with absent or inconclusive laboratory results for MERS-CoV, who is also a close contact of a laboratory-confirmed MERS-CoV case, is considered a probable case of MERS-CoV.

WHO has interim case definitions as of 3 JUL 2013. In addition, WHO published interim recommendations for laboratory testing on 13 SEP 2013 and an assessment of risk of infection among

health care personnel on 27 JAN 2014. For further information on the current epidemiological situation, case or cluster definitions, and laboratory testing, please see the WHO Global Alert and Response coronavirus infections webpage or the CDC MERS-CoV page.

2. DoD Surveillance

Due to frequent deployments with geographic exposure potential and an unknown spectrum of illness presentation in DoD populations, AFHSC recommends the following screening criteria:

A. A person with fever (≥ 38° C, 100.4° F) and cough or respiratory illness; AND EITHER:
- history of travel to the Arabian Peninsula or neighboring countries within 14 days before onset of illness; OR
- close contact with a symptomatic person who developed fever and acute respiratory illness within 14 days after traveling from the Arabian Peninsula or neighboring countries; OR
- is a member of a cluster of patients with severe acute respiratory illness of unknown etiology in which MERS-CoV is being evaluated.

OR

B. Close contact (or health care provider) of a confirmed or probable case of MERS-CoV.

While testing for MERS-CoV under the Emergency Use Authorization signed by FDA in APR 2013 relies on the CDC definition, which includes pneumonia or acute respiratory distress syndrome (ARDS), many patients have presented with different and sometimes less severe symptoms. AFHSC encourages clinicians to use their best judgment in evaluating patients with a focus on recent travel to or contact with persons from the Arabian Peninsula.

For population-based surveillance, DoD public health personnel at Military Treatment Facilities should use the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) or Medical Situational Awareness in Theater (MSAT) to monitor routine influenza-like illness infections in their population for any increases not usually seen during summer months. Any aberrations should be investigated for potential MERS-CoV risk factors. In addition, more severe respiratory illnesses can be monitored using ESSENCE or MSAT by creating a syndrome group with the ICD-9 codes listed below. Since ESSENCE captures only outpatient data, hospitalized individuals with severe respiratory disease should also be investigated. MSAT can be used to monitor both outpatient and inpatient populations.

The codes are:
- 480.9: Viral pneumonia, unspecified
- 486: Pneumonia, organism unspecified
- 518.8x: Other diseases of the lung (includes acute respiratory distress and failure)
  - 518.81: Acute respiratory failure, respiratory failure NOS
  - 518.82: Other pulmonary insufficiency, not elsewhere classified
  - 518.84: Acute and chronic respiratory failure, acute on chronic respiratory failure
- V07.0: Isolation – admission to protect the individual from his surroundings or for isolation of individual after contact with infectious diseases

3. Laboratory Testing

***Please note that it is strongly recommended that lower respiratory specimens should be used for diagnostic testing; these include sputum, endotracheal aspirate, or**

bronchoalveolar lavage. If patients do not have signs or symptoms of lower respiratory tract infection and lower tract specimens are not possible to obtain or are not clinically indicated, both nasopharyngeal and oropharyngeal specimens should be collected. If symptom onset was more than 14 days prior, it is strongly recommended to include additional testing of a serum specimen via the CDC MERS-CoV serologic assay.*

A. Clinical Diagnostic Testing

DoD medical personnel requiring clinical diagnostic laboratory testing for suspected MERS-CoV infection may contact the following POCs, whose laboratories have relevant testing capabilities:

LRMC Infectious Disease Laboratory
Landstuhl, Germany
MAJ Jim Managbanag
Jim.r.managbanag.mil@mail.mil
DSN: (314) 590-4432

US Air Force School of Aerospace Medicine
Wright-Patterson AFB, OH
Dr. Elizabeth Macias
Elizabeth.macias@us.af.mil
DSN: 798-3175
Civ: (937) 938-3206
Cell: (937) 581-8552

Naval Health Research Center
San Diego, CA
Dr. Chris Myers
Chris.myers2@med.navy.mil
Civ: (619) 553-0891

Naval Medical Research Unit – 3
Cairo, Egypt
LCDR Gabriel Defang
gabriel.defang@med.navy.mil
Civ: 011-202-2348-0379

Tripler Army Medical Center
Honolulu, HI
MAJ Jason Barnhill
Jason.c.barnhill2.mil@mail.mil
Civ: (808) 433-7923

Walter Reed National Military Medical Center
Bethesda, MD
MAJ Robert Cybulski
Robert.cybulski@us.army.mil
Civ: (301) 295-8617

San Antonio Military Medical Center
San Antonio, TX
CPT Nabil H. Latif
Nabil.latif@us.army.mil

Civ: (210) 916-0876

B. Surveillance Testing

DoD medical personnel requiring surveillance laboratory testing for retrospective testing of populations for MERS-CoV infection may contact the following POCs, whose laboratories have relevant non-diagnostic testing capabilities:

I. CDC-supplied surveillance testing kits:

US Army Medical Research Unit – Kenya
Nairobi, Kenya
Dr. John Waitumbi
John.Waitumbi@usamru-k.org
Civ: +254 733 616548

II. Naval Medical Research Center-supplied surveillance testing kits:

Armed Forces Research Institute of Medical Sciences
Bangkok, Thailand
MAJ Stefan Fernandez
Stefan.Fernandez@afrims.org
Civ: (66-2) 698-2756

Naval Medical Research Unit – 2
Phnom Penh, Cambodia
CAPT A. F. Vaughn
andrew.vaughn@namru2.org.kh
Civ: +855 (23) 884-228

Naval Medical Research Unit – 3
Cairo, Egypt
LCDR Gabriel Defang
gabriel.defang@med.navy.mil
Civ: 011-202-2348-0379

Naval Medical Research Unit – 6
Lima, Peru
LCDR Mark Simons
Mark.Simons@med.navy.mil
Civ: (51-1) 614-4134

Naval Health Research Center
San Diego, CA
Dr. Chris Myers
Chris.myers2@med.navy.mil
Civ: (619) 553-0891

223rd Medical Detachment (Preventive Medicine)
Camp Arifjan, Kuwait
CPT Carlos Barrera
Carlos.a.barrera@us.army.mil
DSN: (318) 430-4411/7843

4. Reporting

AFHSC recommends that cases of MERS-CoV infection be reported to the Service-specific public health Chain of Command within 4 hours of laboratory confirmation of infection and be immediately followed with a report to AFHSC as an "outbreak or disease cluster" consistent with the Armed Forces Reportable Event Guidelines.

AFHSC POC:
For further information, contact the AFHSC's Division of Integrated Biosurveillance (DIB) or the Division of Global Emerging Infections Surveillance & Response Systems (GEIS):

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Dr. Stic Harris, Team Lead, Alert & Response Operations (DIB): 301-319-3297
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